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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/792,072

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Hideyuki Kakinuma

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EXAMINER

DESAI, ANISH P

ART UNIT

PAPER NUMBER

1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/792,072

Applicant(s)

KAKINUMA ET AL.

Examiner

Anish Desai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's arguments see pages 1-6, filed 01/23/07 in response to the Final Rejection dated 10/19/06 have been fully considered and are persuasive. Therefore, the finality of aforementioned Final Rejection is withdrawn.
2. 103-type rejections of Butterbach et al. (US 5,512,625) are withdrawn because Butterbach does not teach the weight ratio A/C in the range of 100/50 to 100/100 as claimed. Similarly, 103-type rejections of Haardt et al. (US 5,180,628) in view of Butterbach et al. (US 5,512,625) are withdrawn because Butterbach does not teach the weight ratio A/C in the range of 100/50 to 100/100 as claimed.
3. A new ground of rejection is made over Haardt et al. (US 5,180,628) in view of Tomoaki et al. (JP 2000-226561).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haardt et al. (US 5,180,628) in view of Tomoaki et al. (JP 2000-226561) (English translation provided by the examiner).

With respect to claims 1 and 8, Haardt teaches a shock-absorbing propylene polymer composite molding that can be used for production of motor vehicles for example door panels, consoles, sun visors, bumpers, and spoilers (Column 3, lines 65-

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68). The shock absorbing molding propylene molding contains layer of polypropylene (a), an intermediate layer of hot melt adhesive based on olefin copolymer (b), propylene based foam layer (c), an intermediate layer of hot melt adhesive (d), and a propylene layer (e) (abstract and column 2, lines 23-25). The polypropylene layer with the hot melt adhesive of Haardt reads on a pre-applied outer layer material for automotive interior trim, which comprises having applied to the back surface of the outer layer material for an automotive interior trim a hot melt as claimed.

With respect to claims 1 and 8 Haardt is silent as to teaching of the hot-melt having (A) an amorphous poly-alpha-olefin (APAO) having a melting viscosity in the range of 500-100,000 mPa*s/190°C, (B) a tackifier resin having a softening point of not lower than 110°C, (C) a polypropylene (PP) wax having a melting point of not lower than 120°C, and weight ratio of A/C in the range of 100/50 to 100/100 (i.e. 2 to 1) (claim 1) and weight ratio of A/B in the range of 100/10 to 100/100 (i.e. 10 to 1).

Regarding claims 1 and 8, Tomoaki discloses a hot-melt adhesive that has high flexibility, low possible coating temperature, low coating viscosity, high tack generation temperature, high blocking resistance, and short open time (page 9). The hot-melt adhesive of Tomoaki comprises 50-90 wt% amorphous polyolefin polymer, 5-44 wt% of a crystalline polypropylene wax with a softening point of 120°C or higher, and 1-20 wt% of tackifying resin (page 2). The amorphous polyolefin of Tomoaki has a viscosity of 1,500 to 50,000 cps at 190°C, which converts to 1,500 to 50,000 mPa*s (1 cp = 1 mPa*s). With respect to the limitation of tackifier resin having softening point of not lower than 110°C, it is noted that Tomoaki discloses the same types of tackifier resins

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(e.g. terpene, modified terpene, hydrogenated resins such as hydrogenated terpene) (page 16-17) as disclosed by the applicant on pages 11-12 of the specification.

Therefore, it is reasonable to presume that the tackifying resin of Tomoaki has softening point of not lower than 110°C (*In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)). With respect to the claimed weight ratio of APAO (A) to PP wax (C) of 100/50 to 100/100, as previously disclosed the hot-melt adhesive of Tomoaki comprises 50-90 wt% APAO polymer, 5-44 wt% of a crystalline PP wax, which reads on said weight ratio (e.g. 50 wt% APAO and 25 wt% of PP wax = 100/50 weight ratio).

Regarding, the claimed weight ratio of the APAO (A) to the tackifier resin (B) of 100/10 to 100/100, as previously disclosed the hot-melt adhesive of Tomoaki comprises 50-90 wt% APAO and 1-20 wt% of the tackifier resin, which reads on said weight ratio (e.g. 50 wt% of APAO and 5 wt% of tackifier resin = 100/10 wt ratio). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the hot-melt adhesive of Tomoaki in the invention of Haardt, motivated by the desire to use a hot-melt adhesive that has high flexibility, low possible coating temperature, low coating viscosity, high tack generation temperature, high blocking resistance, and short open time.

With respect to claims 2 and 10, the invention of Tomoaki as modified by Haardt is previously disclosed. With respect to claims 3, 7, 10, and 11, as previously disclosed Haardt as modified by Tomoaki discloses shock-absorbing PP polymer composite molding containing PP based layer (a)/hot-melt adhesive layer (b)/PP based foam layer (c)/hot-melt adhesive layer (d)/pp based layer (e). Thus, it would have been obvious to

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one having ordinary skill in the art at the time the invention was made to use the hot-melt adhesive of Tomoaki in the invention of Haardt, motivated by the desire to use a hot-melt adhesive that has high flexibility, low possible coating temperature, low coating viscosity, high tack generation temperature, high blocking resistance, and short open time. With respect to claim 4, the invention of Haardt as modified by Tomoaki is previously disclosed. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the hot-melt adhesive of Tomoaki in the invention of Haardt, motivated by the desire to use a hot-melt adhesive that has high flexibility, low possible coating temperature, low coating viscosity, high tack generation temperature, high blocking resistance, and short open time. With respect to claim 5, the thickness of the hot melt layer of Haardt is 0.05 mm to 0.5 mm (abstract), which converts to 50 μm to 500 μm (1 mm = 1,000 μm). Regarding claim 6, the recitation of "not more than 30 weight % of a polyolefin" is interpreted as hot melt having no (i.e. zero wt%) polyolefin because the recitation "not more than 30 weight %" includes zero. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the hot-melt adhesive of Tomoaki in the invention of Haardt, motivated by the desire to use a hot-melt adhesive that has high flexibility, low possible coating temperature, low coating viscosity, high tack generation temperature, high blocking resistance, and short open time.

With respect to claim 9 the weight ratio of APAO (A) to PP wax (C) of 100/50 to 100/80, as previously disclosed the hot-melt adhesive of Tomoaki comprises 50-90 wt% amorphous polyolefin polymer and 5-44 wt% of a crystalline polypropylene wax.

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Additionally, with respect to the weight ratio of APAO (A) to the tackifier resin (B) of 100/30 to 100/60, the hot-melt adhesive of Tomoaki comprises 50-90 wt% amorphous polyolefin polymer and 1-20 wt% of tackifier resin (e.g. 50 wt% APAO and 20 wt% of tackifier resin = 100/40 wt ratio). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the hot-melt adhesive of Tomoaki in the invention of Haardt, motivated by the desire to use a hot-melt adhesive that has high flexibility, low possible coating temperature, low coating viscosity, high tack generation temperature, high blocking resistance, and short open time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

APD


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